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NO. 7

A Technique for Sectional Removal of Impactions - - - - -	294
<i>Welden E. Bell, D.D.S.</i>	
Construction of Study Models - - - - -	298
<i>A. Wolfson, D.D.S.</i>	
Acute Diffuse Osteomyelitis Following Instrumentation in Treatment of Pyorrhea - - -	301
<i>Harry L. Miller, D.D.S.</i>	
Correction of Cross-Bite - - - - -	304
<i>Irving H. Goldstein, D.D.S.</i>	
Label for Garden Plants - - - - -	306
<i>C. A. Sturdevant, D.D.S.</i>	
The Editor's Page - - - - -	307
Waxless Cast Crown Restorations - - - - -	308
<i>James E. Simonton, D.D.S.</i>	
Notes on the Cuff - - - - -	310
Dental Meeting Dates - - - - -	315

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SEE PAGE 324 FOR SUBSCRIPTION DATA, ETC.

A Technique for Sectional Removal of Impactions

WELDEN E. BELL, D.D.S., Dallas, Texas

Mucoperiosteal Flap

THE MUCOPERIOSTEAL flap is turned in the same general way for the three common types of impacted mandibular third molars: vertical, mesio-angular, and horizontal. Fig. 1 shows the necessary incisions. Fig. 2 shows the flap turned. If bone covers the crown, it is removed to expose the tooth. Usually, however, little if any bone must be removed at this stage.

I. Vertical Type

The vertical type impaction of mandibular third molars (Figs. 3 and 4) is usually difficult to remove because it does not permit a lever force to be applied to it. It would, therefore, facilitate removal if the tooth could be modified in such a way as to allow the use of lateral stress for loosening it. This can be done in the following manner:

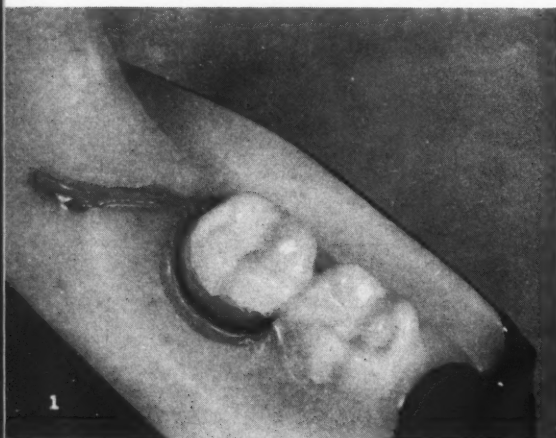


Fig. 1—Necessary incisions.

Fig. 2—Flap turned.



1. Place a small, sharp, long-beveled, carbon steel chisel in the groove between the buccal cusps.

2. With a sharp, "carry-through" blow of a lead-faced mallet, split off the distal half of the tooth (Figs. 5 and 6). This fragment is removed with a root pick.

3. Remove enough buccal bone (if necessary) to apply a heavy root pick or elevator to the mesiobuccal angle.

4. Loosen the tooth by tipping it distally into the newly created space (Figs. 7 and 8).

5. The tooth thus loosened may be removed with an elevator or with forceps (Figs. 9 and 10).

II. Mesio-Angular Type

The mesio-angular type (Figs. 12 and 13) offers difficulty because of its locked position underneath the crown of the second molar. To prevent injury to the second molar, this type should be carried distally during removal:

1. Split off the distal half of the tooth in a manner similar to that used for the vertical type impaction (Figs. 14 and 15). This fragment is removed with a root pick.

2. Sufficient buccal bone is removed to allow application of a heavy root pick or elevator to the mesiobuccal angle of the tooth.

3. The tooth is then lifted back into the newly created space. This converts the tooth into the vertical type (Figs. 16 and 17).

4. From this position the tooth may be removed with an elevator or forceps (Figs. 18 and 19).

III. Horizontal Type

The horizontal type impaction of mandibular third molars presents an even greater danger of undue trauma to the second molar:

1. This danger is reduced and removal facilitated by splitting the tooth lengthwise with a chisel. Fig.

23 shows the tooth split longitudinally.

2. With the removal of only a small amount of bone, the top half may be removed with forceps or root pick (Figs. 24 and 25).

3. A root pick is then engaged at the buccal of the remaining fragment to displace it upward (Fig. 26).

4. From the upward position the fragment may be removed with an elevator or with forceps (Fig. 27).

Closure

1. Inspect the socket carefully and remove every particle of tooth structure, bone, or remnant of the formative organ.

2. Smooth the edges of bone and leave perfectly clean.

3. Suture the mucoperiosteum immediately distal to the second molar to insure proper position of the soft tissue.

4. Suturing in this way usually necessitates some type of gauze dressing to maintain adequate drainage. This dressing is inserted between the edges of soft tissue distal to the suture itself (Fig. 28).

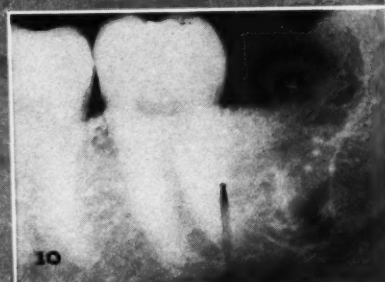
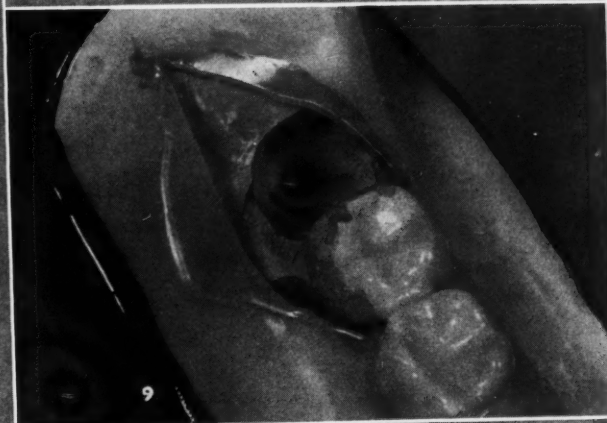
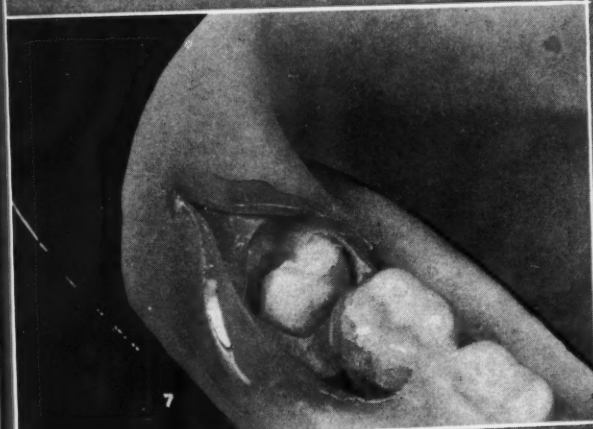
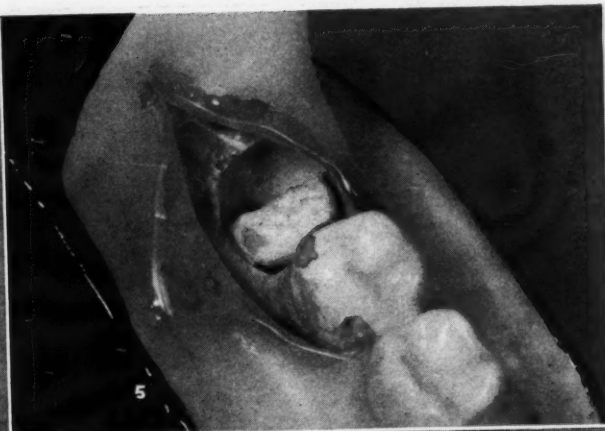
Baylor University.

See illustrations

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on following

three pages



Figs. 3 and 4—Vertical type mandibular impaction.

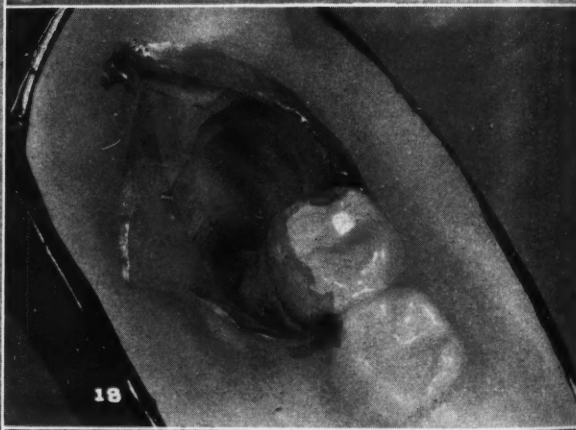
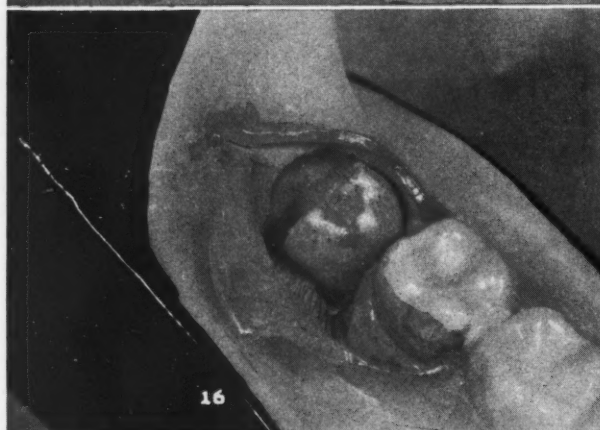
Figs. 5 and 6—Tooth split to facilitate removal.

Figs. 7 and 8—Tooth tipped distally.

Figs. 9 and 10—Socket immediately after removal.

Fig. 11—Operative area healed.





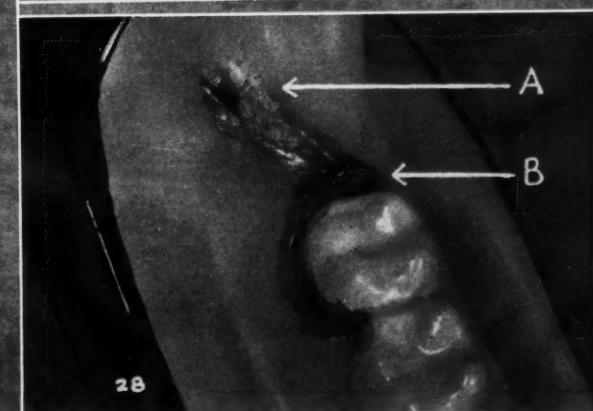
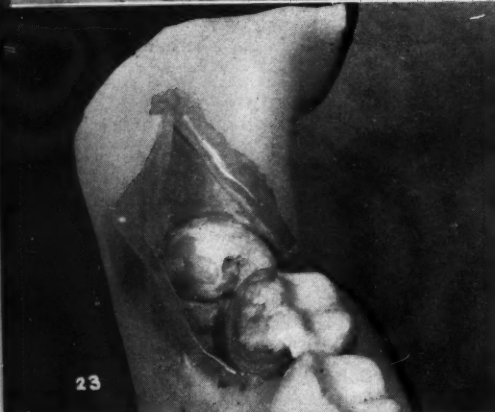
Figs. 12 and 13—Mesio-angular type mandibular impaction. Note locked position under crown of second molar.

Figs. 14 and 15—Tooth split to facilitate removal.

Figs. 16 and 17—Mesio-angular impaction converted into vertical type.

Figs. 18 and 19—Socket immediately after tooth removal.

Fig. 20—Healed socket.



Figs. 21 and 22—Horizontal impaction.

Fig. 23—Tooth split longitudinally to facilitate removal without trauma to second molar.

Figs. 24 and 25—Removal of small amount of bone enables top half of

tooth to be removed with elevator or forceps.

Fig. 26—Tooth fragment displaced upward.

Fig. 27—Socket after removal of fragment.

Fig. 28—A, Dressing inserted distal to suture, B.

Construction of Study Models

A. WOLFSON, D.D.S.
Newark, New Jersey

Fig. 1—Adaptable orthodontic trays are numbers 1, 3, 5, 8 for the uppers; numbers 18, 22, 26, 28 for the lowers. Any compound of good working qualities may be used, preferably, one that leaves no stains on the plaster. Compound should be formed into a roll and placed into the trays as illustrated. Immediately before insertion, the exposed surface of the compound is quickly flamed, and the tray chilled under running water.

Fig. 2—Trays should be inserted into the mouth and pushed straight up in the direction of the long axis of the anterior teeth. This direction should not be disturbed at any time. The posterior teeth will make an imprint in the compound after the anterior portion has been well seated.

Fig. 3—Impressions removed from the mouth, showing mucobuccal fold and muscle attachments.

Fig. 4—Impressions waxed with pink base-plate wax; upper shows filling in of a defect; lower shows a platform which should be made flat and parallel to the occlusal plane. Side pieces in the vertical plane are added first to fill out any deficiencies and to form a firm support for the horizontal piece.

Fig. 5—Plaster is poured into the impression to furnish sufficient bulk, so that the casts are not broken, and yet not thick enough to interfere with the formation of the added bases. It is desirable to use a slow-setting plaster for this purpose and to choose for the bases a quick-setting plaster, making certain that both grades of plaster when dried will blend in color.

Fig. 6—Rubber cups, artistically formed, which meet the requirements; there are three sizes of these cups; by using the upper of one size and the lower of any other size, or vice versa, it is possible to obtain seven different combinations.

Fig. 7—Sizes of cups.

Fig. 8—Upper partial cast is seated in the cup and held in position against the base, at a level that will permit the art portion to be in harmony with the anatomic portion of the model. The occlusal surface at this state should be horizontal, and a note made of the height as registered by the numbers on the vertical plane.

Fig. 9—Quick-setting plaster is mixed and poured into the rubber cup; the partial cast is gently seated into the soft plaster and held there; the horizontal position and height, noted previously, are preserved.

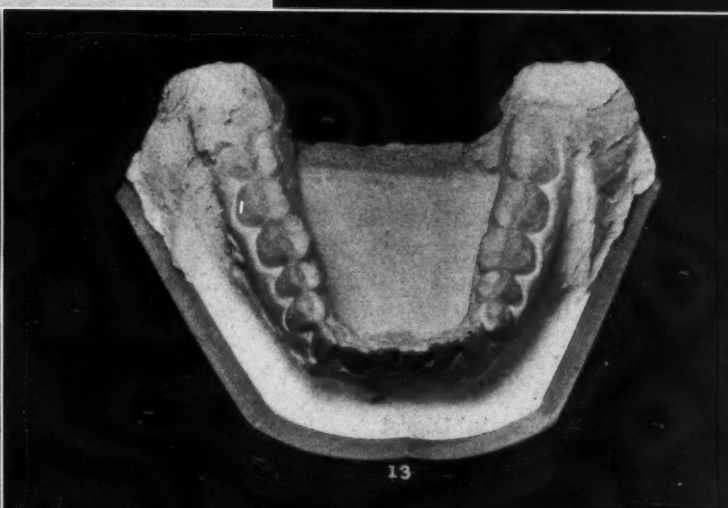
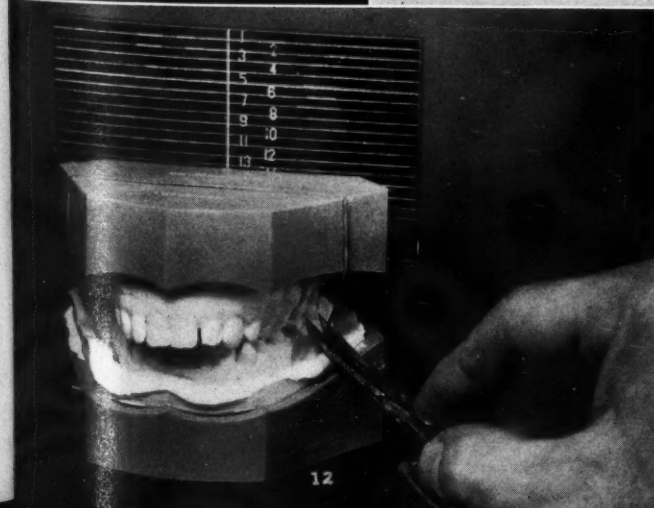
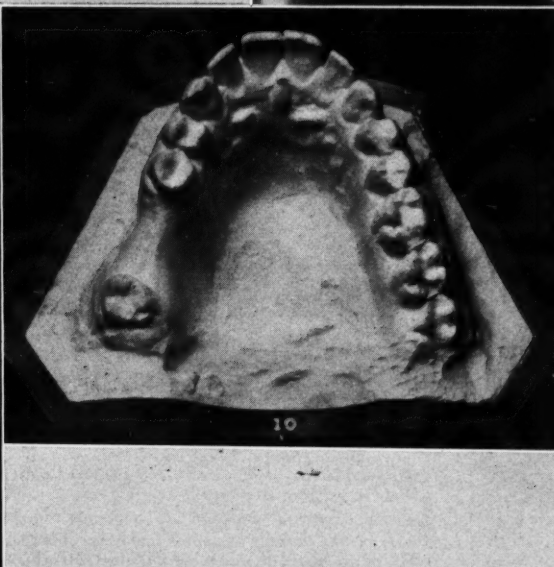
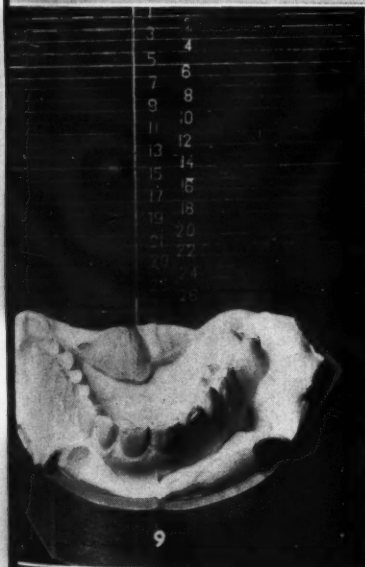
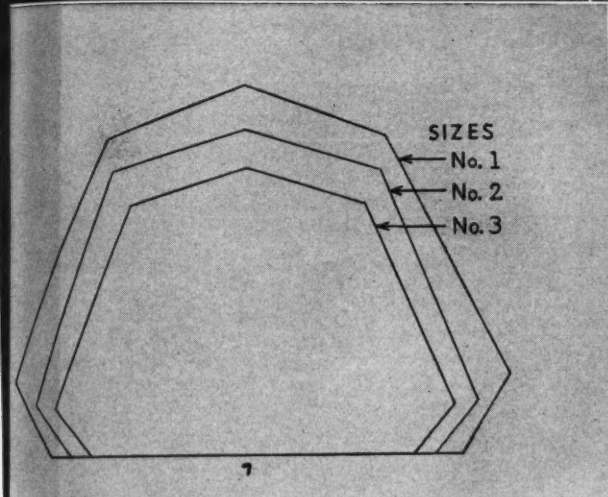
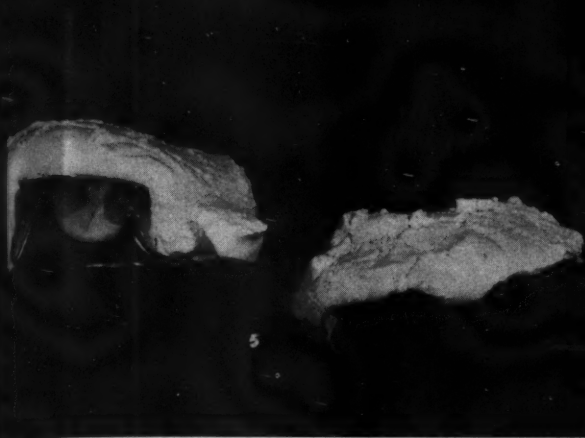
Fig. 10—When the plaster has set the excess is trimmed off gently, but the cast is not removed from the rubber cup.

Fig. 11—The lower is placed in occlusion with the upper and held firmly in position by means of an elastic band as illustrated. At this point, it is desirable to use a small wax bite for greater accuracy in the relation of the casts. The upper surface of the upper cup is held horizontally with its back firmly against the vertical plate. The combined casts are now moved up and down until correct height for the lower art portion is established and the numerical reading recorded.

Fig. 12—Plaster is again mixed and the combined casts moved gently down into the plaster to the number of the height previously established. Hold still for a moment, allowing initial set, and then cut elastic band; pull out elastic; remove upper cast; and trim away excess plaster before it sets.

Fig. 13—Lower cast, immediately before removal from rubber cup.

(Article continued on page 300)



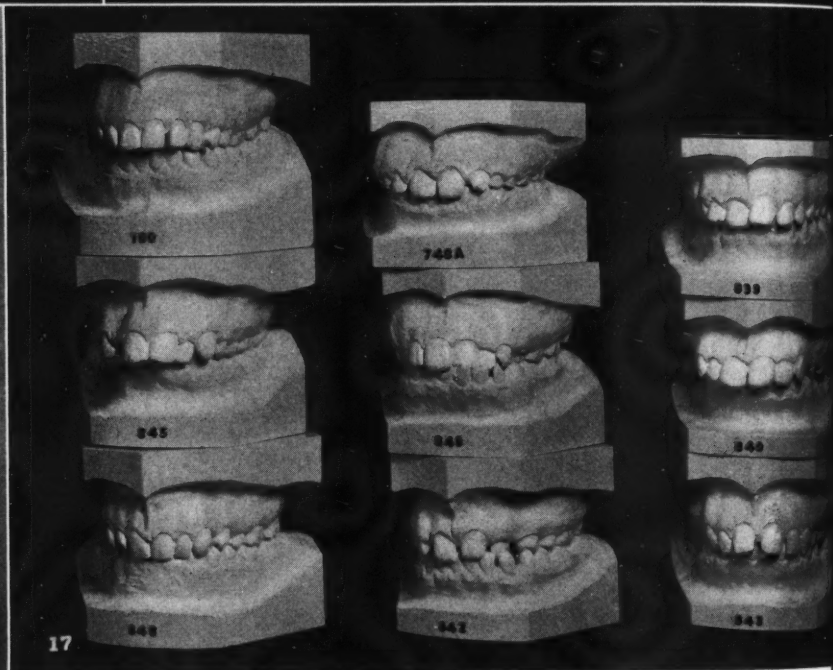
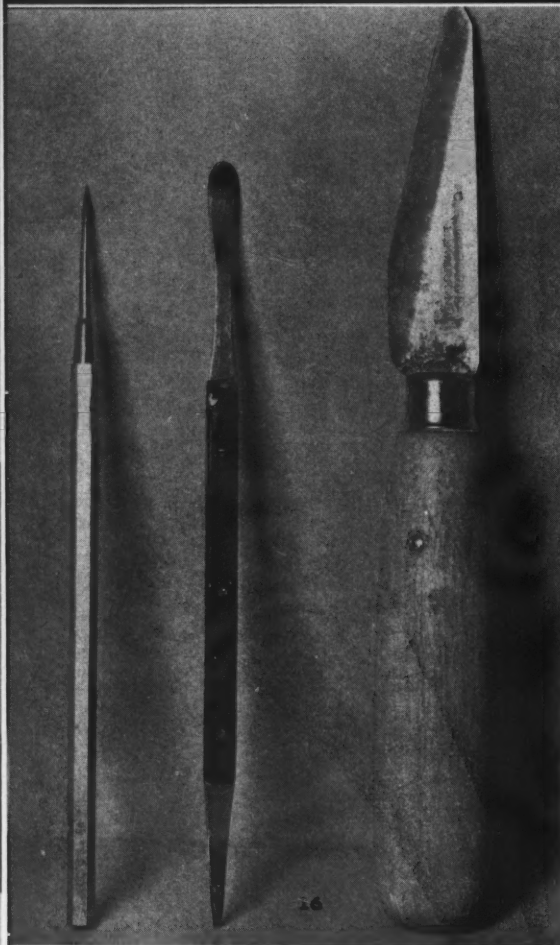
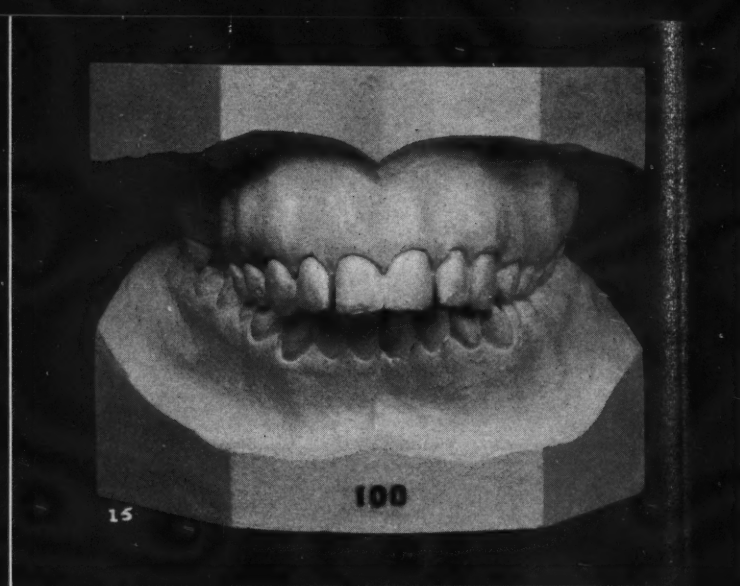


Fig. 14—Upper cast, removed from cup with plaster trimmed on one side.

Fig. 15—Finished model. Gingival margins are outlined by a sharp steel pointed instrument; graceful curves are obtained by trimming with a knife or scraper, and then the surface glazed by painting with a white brushing lacquer. The lacquer should be thinned somewhat for free-flowing consistency. One coat should be applied to the anatomic portion which includes gingivae and teeth, and two coats to the art portion. The number 100 used on this cast is made of black gummed paper. The figures are one-eighth inch high and may be purchased ready made.

Fig. 16—Essential laboratory instruments required in this technique.

Fig. 17—Assortment of models made by this technique, illustrating the wide variations of height and width which are possible with this technique.

Medical Tower.

Acute Diffuse Osteomyelitis Following Instrumentation in Treatment of Pyorrhea

HARRY L. MILLER, D.D.S., Cincinnati

THE PURPOSE OF THIS paper is not an attempt to add to the knowledge of either the treatment or the diagnosis of osteomyelitis, but merely to point out the grave results following the abuse of tissue.

It was previously thought¹ that trauma during the acute stage of an infectious process helped to localize the infectious organism in the bone and surrounding soft tissue. Present opinion, however, is that trauma reduces the bactericidal ability of the tissue, so that bacteria already present or brought there shortly after the injury are able to multiply vigorously.

Careless scaling of teeth or surgery during an acute infection is in direct opposition to this concept and, although widely practiced, frequently ends disastrously for both the patient and the operator.

In the case reported here, tissues were carelessly manipulated and resulted in a severe infection probably by direct extension from the periodontal pockets.

The organized cause of inflammation entered the blood and lymph stream into the nutrient canals and then into the medullary canal² which is filled with soft marrow fat through which infection spread easily up and down the canal by means of the haversian canals, and finally involved the dense compact cortical bone. The early changes occurred within the bone and with no discernible destruction. Later the infection worked up to the periphery involving the cortex, periosteum and surrounding tissues.

Report of Case

A man, aged 26, was admitted to the hospital on August 6, 1936, bearing a

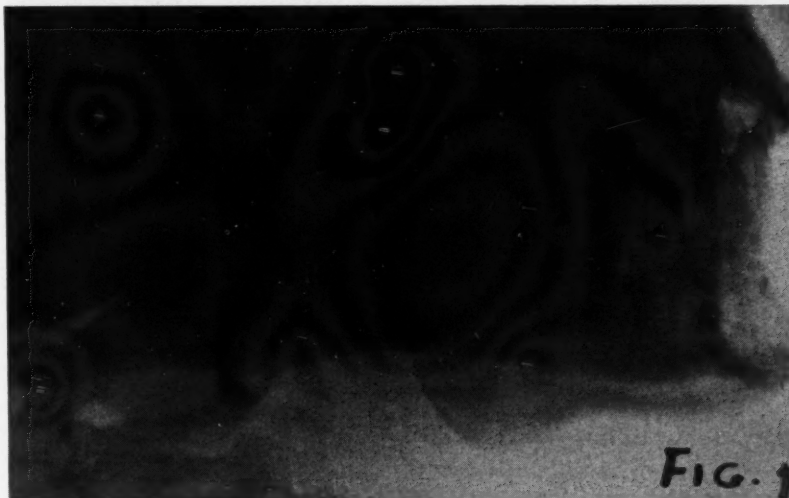


Fig. 1—August 6, 1936. Roentgenogram of the left side of the mandible. Note honeycombed area in the submental region; also regularity of lower border of mandible.



Fig. 2—September 2. Left side of mandible. Note extensive involvement and formation of sequestrum along lower border of mandible.

¹Kaufman, Edward: Pathology for Students and Practitioners, Philadelphia, P. Blakiston's Son & Co., 1929.

²Baetjer, F. H. and Waters, C. A.: Injuries and Diseases of the Bones and Joints, New York, Paul B. Hoeber, Inc., 1935.



Fig. 3—October 2. Right side of mandible. Sequestrum below former position of lower border of mandible, moving down to extra-oral incision.

note from a physician advising hospitalization.

Chief Complaint—The patient complained of excruciating pain, loss of sleep and appetite. He was acutely ill and had a fluctuating swelling at the symphysis of the mandible.

History—The patient went to a dentist on July 21, 1936 for a periodic mouth examination. He had no complaints and was unaware of any periodontal pockets. Three days following vigorous instrumentation, the symphysis of the mandible became involved and grew progressively worse. When admitted the patient already had an active case of osteomyelitis.

Physical Examination — Cardiac, pulmonary and gastro-urinary conditions were normal. The temperature was 102° F., and the pulse, 98.

Examination of the Blood—Reaction to the Wassermann test was negative.

Roentgenologic Examination — Lateral jaw roentgenograms (Fig. 1) taken the day of admission revealed a necrotic moth-eaten area involving the entire symphysis of the mandible;

the lower anterior teeth were extruded from their sockets.

Incision and Drainage—Under general anesthesia, August 8, the lower left and right central and lateral incisors were extracted and two incisions, 2 cm. each, were made in the left and right submental regions where the infection was pointing. Drainage was established, rubber tube drains inserted, and hot magnesium sulphate compresses were continuously applied to the draining areas.

Bacteriologic Report—The report on the purulent exudate was returned as: *Staphylococcus pyogenes aureus*, *Staphylococcus albus*, and *Streptococcus haemolyticus*.

Roentgenologic Report — Lateral jaw roentgenograms of the left and right mandible (Fig. 2), taken September 2, revealed a sequestrum forming along the lower border of the entire symphysis of the mandible.

Sequestrum Removed—The lower border of the mandible to the right of the median line sequestered and was removed through the old incision on September 20.

Course of Infection—From September 25 to October 1, it was noted that the infectious process was spreading to the left of the median line and finally involved the molar area. The teeth became loose, trismus developed, and was followed by a hard swelling at the angle of the left mandible. Hot magnesium sulphate compresses were continuously applied. The temperature of the patient during this period remained around 101° F., the pulse, 98.

Roentgenologic Examination Repeated—A lateral roentgenogram of the right mandible (Fig. 3), October 2, revealed two large sequestrums working down through the incisions made in the left and right submental regions. All the teeth in the left mandible were extruding from their sockets and extensive necrosis was evident.

A right lateral jaw roentgenogram, taken October 5, showed a more extensive necrosis with the sequestrum lower than previously.

Incision and Drainage—October 5, the patient was given a general anesthetic, and an incision, 2.5 cm., was made over the fluctuating area at the angle of the left mandible. The cortical plate was pierced and all necrotic bone and purulent debris carefully curetted. The incisions in the right and left submental regions were enlarged and all sequestrums were removed. Rubber tube drains were inserted connecting the three incisions.

Biopsy Report—The pathologist reported that a specimen of bone removed during the operation was necrotic and crumbling osseous tissue.

Bacteriologic Report—A specimen of pus contained *Staphylococcus pyogenes aureus* and *Streptococcus haemolyticus*.

Blood Count—The report on a specimen of the patient's blood was: white blood count, 7,000; lymphocytes, 24 per cent; polymorphonuclear leukocytes, 76 per cent; red blood count, 3,500,000; and hemoglobin, 56 per cent.

Transfusion—During this period of illness the patient had lost 30 pounds and complained of weakness. The blood count showed the advisability of a transfusion. On October 7 the patient was typed and given 300 cc. of citrated blood.

Roentgenologic Examination Repeated—A lateral jaw roentgenogram of the right mandible taken October 21 showed a marked change in the osseous structure. A faint outline of the regenerated lower border of the mandible was discernible at this time.

Blood Count—The report on the blood examined October 13 was: white blood count, 7,250; red blood count, 3,500,000; hemoglobin, 70 per cent.

Transfusion—The patient's condition was improving slowly, and on October 15 he was given 500 cc. of citrated blood.

Dismissal—Following the second transfusion, the patient improved rapidly and was discharged to the out-patient department on November 15. At this time he had gained 15 pounds. There was slight drainage from the incision at the angle of the left mandible. This fistula continued to drain extra-orally for three weeks more and then ceased.

Final Roentgenologic Examinations—Lateral jaw roentgenograms of the left and right mandible taken November 18 show osseous regeneration restoring the normal contour of the submental region.

Lateral jaw roentgenograms of the left and right mandible and anterior-posterior view taken December 9 (Fig. 4) reveal the complete regeneration of the submental and left molar regions.

Conclusion

Although dental operations do not carry the surgical risk or postoperative complications of a major operation, there is nevertheless some ele-



Fig. 4—December 9. Left side of mandible showing complete regeneration of bone.

ment of risk present. Whenever the involved tissues are needlessly traumatized, their ability to withstand in-

fection is decreased in proportion to the amount of harm done.

19 Garfield Place.

Examination for Appointment in the Dental Corps, Regular Army

AN EXAMINATION FOR selection of candidates for appointment in the Dental Corps, Regular Army, will be held during the period August 15-20, 1938, at the Walter Reed General Hospital, Washington, D. C.; Fitzsimons General Hospital, Denver, Colorado; Letterman General Hospital, San Francisco, California, and Fort Sam Houston, Texas.

The general eligibility requirements for appointment are that the candidate be a citizen of the United States between the ages of 23 and 32 years, be a graduate of an acceptable dental school, and be physically fit. Candidates must also have been engaged in the practice of their profession for at least 2 years subsequent to graduation.

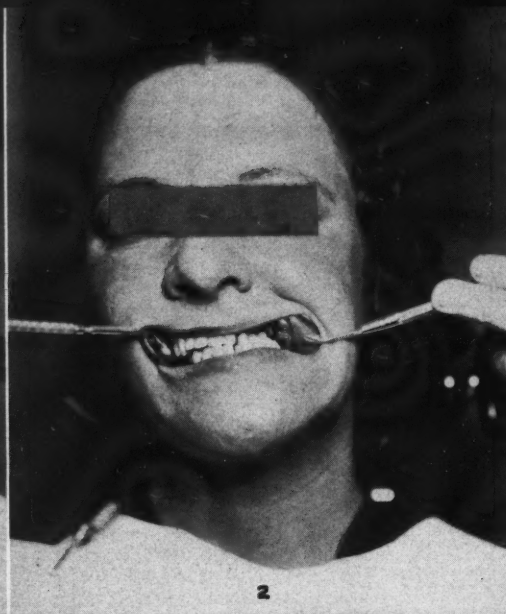
Application for authority to take the preliminary examination must be made on the form provided for the purpose which may be obtained at any military post or station, or from The Adjutant General of the Army, Washington, D. C.

A circular of information concerning the Dental Corps, scope of the examination and method of making application, may be obtained from The Surgeon General, U. S. Army, Washington, D. C.

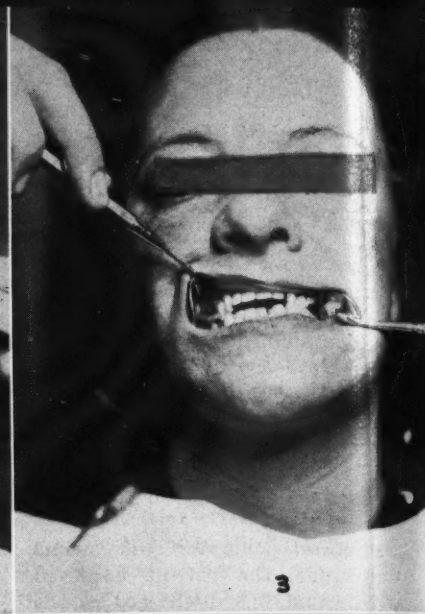
Applications will be received for consideration until August 1, 1938.



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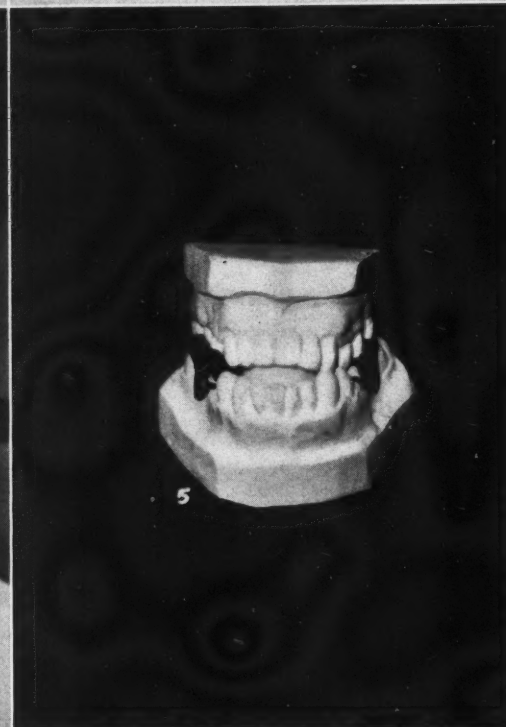
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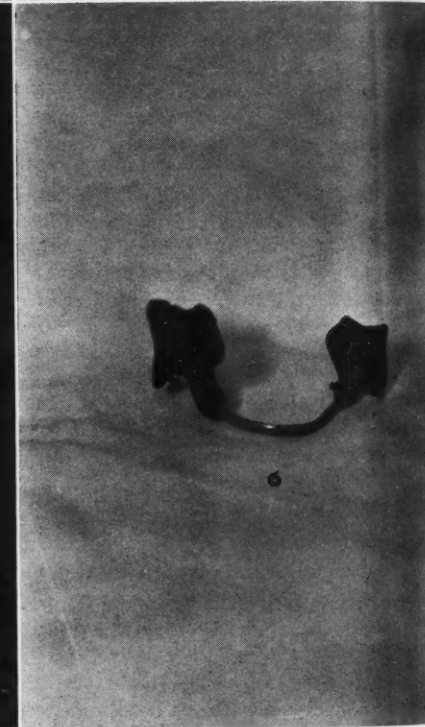
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Correction of Cross-Bite

IRVING H. GOLDSTEIN, D.D.S., Atlanta, Georgia

Report of a Case

History—A married woman, aged 34, had had a slight irregularity of the teeth as a child, which became worse after the extraction, because of caries,

of the lower first permanent molars at the age of 14. At the age of 21, it was necessary to remove the upper anterior incisors and laterals owing to an abscess and infection. Constant

drainage made replacements impossible for about four months, after which an upper partial vulcanite spring denture was made. Approximately two years later, the partial

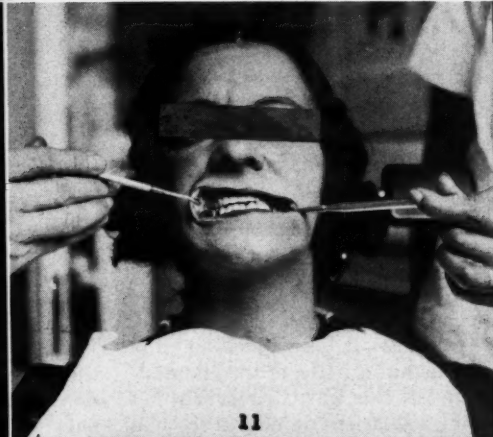
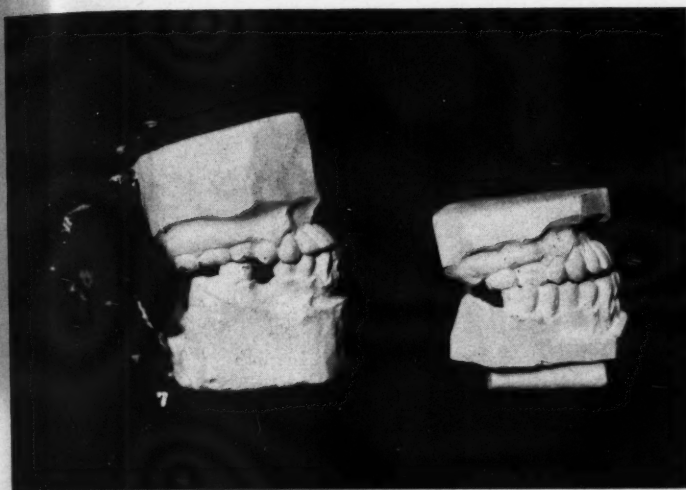


Fig. 1—Before treatment.

Fig. 2—Teeth in occlusion.

Fig. 3—Splint in place.

Fig. 4—Splint in place with mouth closed.

Fig. 5—Splint in place on model.

Fig. 6—Splint.

Fig. 7—Right side of models before and after completion of treatment.

Fig. 8—Left side of models before and after completion of treatment.

Fig. 9—Front view of models before and after completion.

Fig. 10—After treatment was completed.

Fig. 11—Occlusion after treatment.

Fig. 12—Appearance while smiling after treatment.



Fig. 13—Appearance after completion of treatment.

denture was replaced with a fixed upper bridge.

Procedure—It seemed to me that the constant drifting of the mandible to the left side was the result of not having a sufficient number of teeth in occlusion to rest the mouth without going to this extreme position. After the case was studied from many angles, it was decided to see whether the bite could be made to rest in a fairly normal relation, so as to look presentable regardless of the tooth relation.

1. A vulcanite lingual bar splint with two clasps was constructed. The patient wore this for approximately two months, removing the splint only during mastication. The position for the relation of the jaws was arbitrary, and was governed by the appearance of lips, facial expression, and the distance between most of the lower teeth and upper teeth.

There was no pain in the condylar joints. The patient stated that she was more comfortable in occlusion with the splint than without it. There was no pain in the ears, but a great deal of wax formed which disappeared after the first month. At the end of two months, it was believed

safe to proceed according to the bite established by the splint.

2. The splint was cut in two, and the left side was built up: First the upper molars and bicusps were built up with onlays, and the lower teeth restored by means of a fixed bridge, with the bite locked in occlusion through definite and well defined cusps.

3. The right side was completed in the same way, built to the newly established bite of the left side.

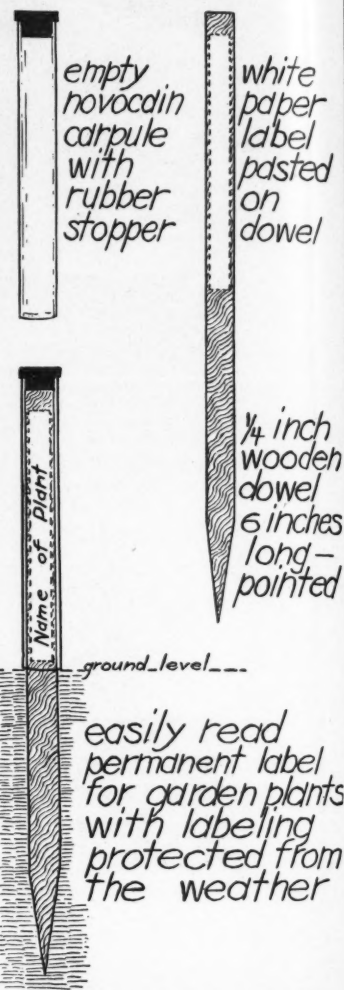
4. An anterior bridge, from cuspid to cuspid, was present in the mouth. This was removed and replaced with trupontics and three-pin hoods on the cuspids, which provided a presentable restoration with only a slight open bite.

5. The only extraction was that of a right upper third molar, which was entirely out of occlusion and inclined buccally.

Result—The case was completed on November 10, 1937. The patient was last seen on December 10, at which time the bite was rechecked. There has been no further drifting since the bite was established.

Grant Building.

Label for Garden Plants



C. A. STURDEVANT, D.D.S. of Meadville, Pennsylvania, suggests a use for empty glass anesthesia carpules. "Being interested in gardening, Doctor Sturdevant says, I have looked in vain for a cheap label for my plants that would not be defaced by rain and could be easily read. The discarded carpule has helped me solve the problem and I pass it on in the hope that the idea may be of use to other amateur gardeners, and help find a use for empty glass anesthesia carpules. The carpule may be sealed with rubber cement at the ground level to prevent dirt from entering."—513 Crawford County Trust Building.

The Editor's Page

LAST MONTH, IN this department was sketched the ramified theory of colloidal equilibrium on which F. W. Broderick¹ of England bases his treatment for dental caries and periodontal disease. Some of the details of this treatment will now be considered. Broderick conceives of dental caries as depending fundamentally on an acidosis which is associated with dehydration. Acidosis can be compensated by the administration of alkalis. Chronic acidosis diminishes the alkali reserve, which constitutes the danger to the teeth. The reserve must be augmented. For this purpose the alkalis are administered in quantities greater than the immediate need, so that at least some of the excess may be stored within the body to increase this alkali reserve.

Sufficient basic salts are necessary to balance not only the acidic salts in the food supply but also the acids produced in the processes of living. To this end, Broderick administers a preparation² which contains all the salts present in the blood, approximately in the proportion in which they normally exist.

In his own practice, Broderick³ experimented with insulin (a hydrator of protein particles) in children, of from 7 to 10 years of age, with rampant caries in deciduous teeth and first permanent molars. These children presented definite evidence of dehydration. With the idea of hydrating the protein particles, insulin was injected subcutaneously, beginning with 2 units and increasing the amount cautiously by $\frac{1}{2}$ units until 4 units a day had been reached. By the fourth or fifth day a distinct change was noticeable in the reaction of the saliva from the acid to the alkaline side. The character of the exposed dentine likewise slowly changed until in three weeks all the physical characteristics of "arrested caries" were evident. The diet was not altered nor the daily routine of the children disturbed. Just as in diabetes, however, the biochemical alteration was not found to be lasting, and the children returned to their original state when administration ceased. The insulin nevertheless converted an acidosis to an alkalosis during its use.

¹Broderick, F. W.: *The Principles of Dental Medicine*, St. Louis. The C. V. Mosby Company, 1936.

²Nutritive Salts, 15 grains, Parke, Davis & Co. (Pritchard); Mitte 1 stock bottle of 100 tablets. One or two to be taken each morning before breakfast as directed.

³Official dentistry in England, and the Board of Education have denied Broderick the facilities of their dental clinics. His experiments in treatment have, therefore, been limited to his own practice.

Broderick is not ready, however, to advocate insulin treatment alone for dental caries. A combination of methods at present is necessary: all hygienic factors (cleanliness, daily bowel action, physiologic rest, careful exercises, and controlled breathing of fresh air); control of psychic influences; injection of insulin in suitable cases; the use of conductors (metallic hydrator preparations); the administration of alkalis and vitamin D over a prolonged period. In addition, sugar (especially glucose) is fed to "sugar-starved" children (children with unstable metabolism whose energy is easily exhausted).

In pyorrhea there is an alkalosis present instead of an acidosis; there is an excess of the potassium ion over that of calcium; an excess of parasympathetic innervation rather than excess sympathetic; diminished thyroid and adrenal secretion; and hydration rather than dehydration of the protein particles of the blood plasma.

Again, drawing from McDonagh, Broderick's treatment for periodontal disease consists of (1) satisfactory colonic lavage to eliminate the source of intoxication as the seat of origin; (2) the establishment of colloidal equilibrium by the use of condensers (preparations of non-metals providing negatively charged atoms) and dehydrators; (3) the specific source of pyorrhea prevention which is the following: (a) subcutaneous injection of oxygen with a special apparatus; (b) intravenous or intramuscular injection of calcium; (c) intramuscular injection of contramine, followed, or not, as required, by (d) two symmetrical urea compounds known as Sup. 36 and Sup. 468, preparations that liberate hydrogen atoms which act as conductors; (e) collosol iodine, ichthyol, and extract of thyroid by mouth. The manner of administration of these preparations has been carefully developed and is essential in treatment.

Surgical treatment is regarded by Broderick as a palliative rather than a cure, because it deals with end-results of disease, and not causes. Antiseptics and instrumentation likewise are effective only in treatment but are of no help in prevention. According to this theory, it is the vegetative imbalance in which symptoms rest which must be corrected.

Waxless Cast Crown Restoration

JAMES E. SIMONTON, D.D.S., Abbeville, Alabama

THE WAXLESS CAST crown technique is a summary and result of many various casting methods, which is intended for the full cast crown, but with a few simple modifications, it can be used in three-quarter crown castings.

Advantages

1. The technique illustrated here is accurate in that the anatomic contours of the tooth and its inclined cusp planes, worn to perfect occlusion by movements of mandibular excursions, are faithfully reproduced.

2. The time is shortened by at least

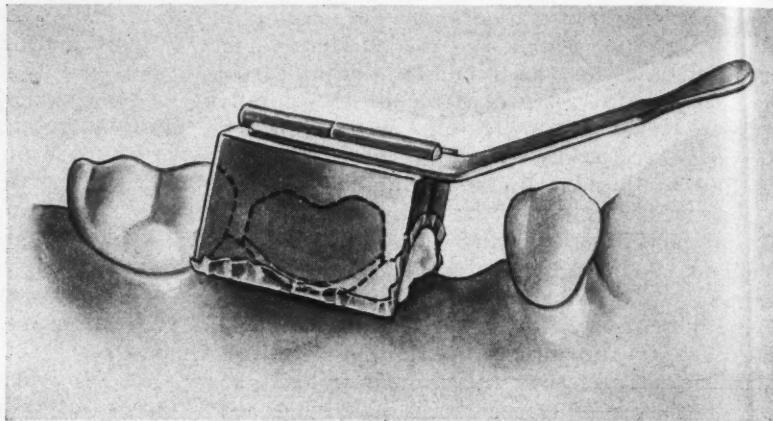


Fig. 1

Direct Method:

Fig. 1—Secure at least two impressions of tooth; one in inlay investment material and the second in Solvite, Complaster or other similar material and place aside. Save the Solvite impression to pour a cast of Castone for use in making a duplicate of the original tooth should the cast crown prove faulty.

Fig. 2—Prepare the tooth by grinding down free of occlusion and give shape to the abutment.

Adapt tin foil (.002 of an inch gauge) cap (tin foil backing from an Eastman AD film) over prepared abutment in the mouth. Remove the tin foil cap from abutment and trim 1 mm. short of gingiva. Replace tin foil cap on the abutment in the mouth and readapt.

Take impression in Solvite, Complaster, or other similar material with the tin foil cap in position on abutment.

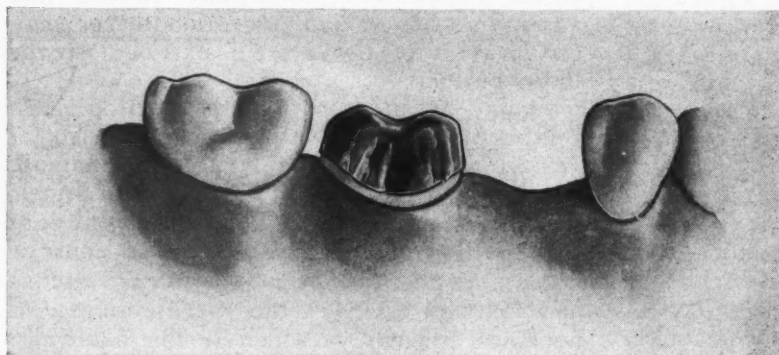


Fig. 2

one-half that required with any other method.

3. Bites, unnecessary models, mountings, articulators, and the tedious, delicate carving, and eye-strain are eliminated.

4. The only necessary expenditure for additional equipment comprises a purchase of Roach impression trays.

Tin Foil Matrix Lining Technique

1. Make a block of compound to fit loosely in the impression tray, so that a sheet of tin foil (size $1\frac{1}{4}$ by $2\frac{1}{4}$ inches) can be folded over it.

2. Lubricate the tray with cocoa butter.

3. Press the impression into the tray.

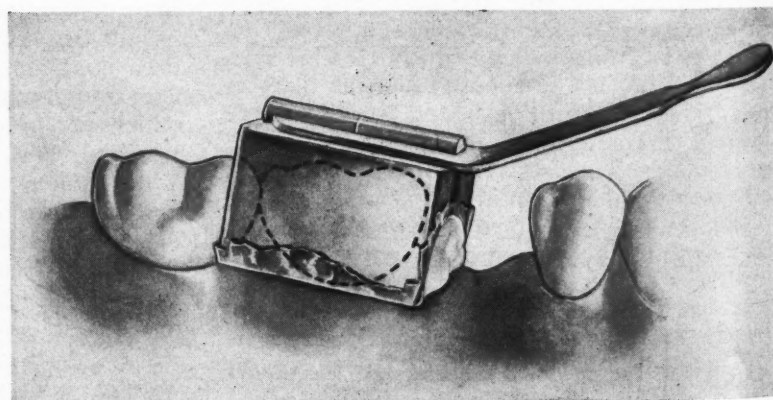


Fig. 3

Fig. 3—After removal of impression from mouth, carefully remove tin foil cap from impression, silex and pour a cast of inlay investment. After it has set, separate.

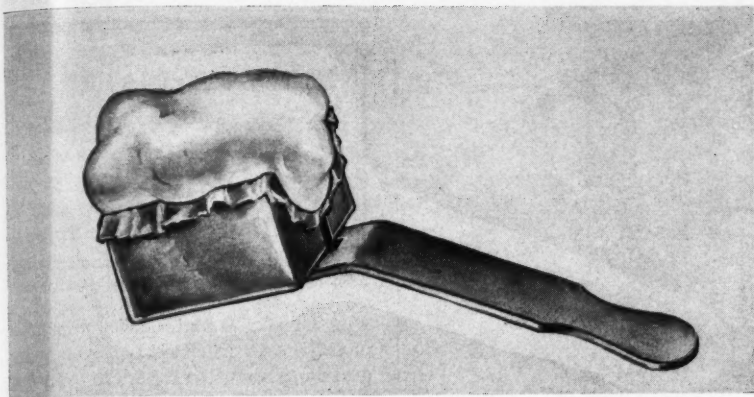


Fig. 4

4. Turn back the tin foil edges to produce a matrix lining for the tray.

5. The block is withdrawn, leaving a well formed and adapted tin foil matrix lining in the tray, ready for use in securing impressions that are easy to slide from the tray.

6. Should the handle to the tray prove a handicap in securing the impression, the handle may be removed and a small rubber band slipped around the tray to hold it firmly together.

A formula for an ideal sillex consists of liquid sodium silicate with an equal part of water and sufficient red ink to color. If sillex is kept in a glass container with ground stopper, it is wise to keep the stopper well coated with vaseline.

Indirect Method:

Should the indirect method be desired, a Solvite impression as in Fig. 1 is all that is necessary. This impression is removed from the mouth, silixed, and a cast of Castone is poured. From this cast of Castone any number of inlay investment impressions can be secured.

After the abutment has been prepared as in Fig. 2, an impression is taken in Solvite, which is silixed, and a cast of Castone is poured, allowed to set and then separated.

For the remainder of the technique, the procedure is similar to the direct technique which is given in the legends to the accompanying illustrations.

Always lubricate the Castone models well with cocoa butter before attempting impressions.

Masonic Building.

Fig. 4—Before removal of inlay investment impression (Fig. 1) from tray, drill a sprue-hole the size of sprue at convenient casting point from within the crown impression. Remove impression from tray, pull off tin foil matrix and flow wax into sprue opening. Place crown impression from Fig. 1 over cast from Fig. 3 as shown in Fig. 4.

Fig. 5—Trim to small size. Cut notches as shown in drawing; then wire cast and impression together.

Fig. 6—Carve a depression for a wax button (Fig. 5). Insert hot sprue into sprue opening that contains wax; add surplus wax, and carve button. Now mold is ready to mount on sprue-former for investing and casting by usual method.

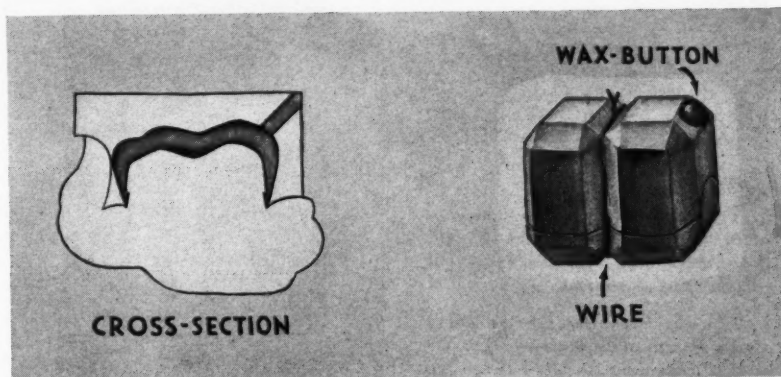


Fig. 5

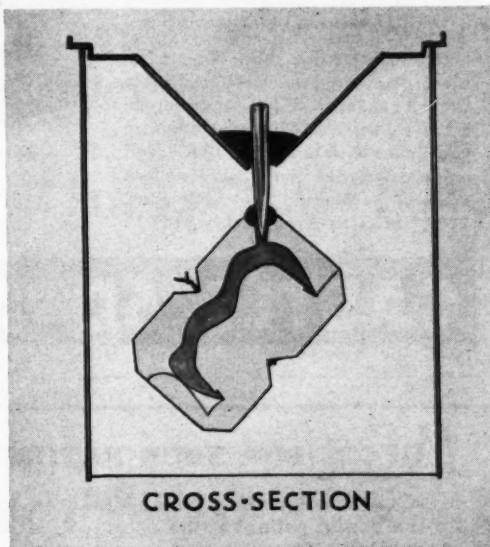
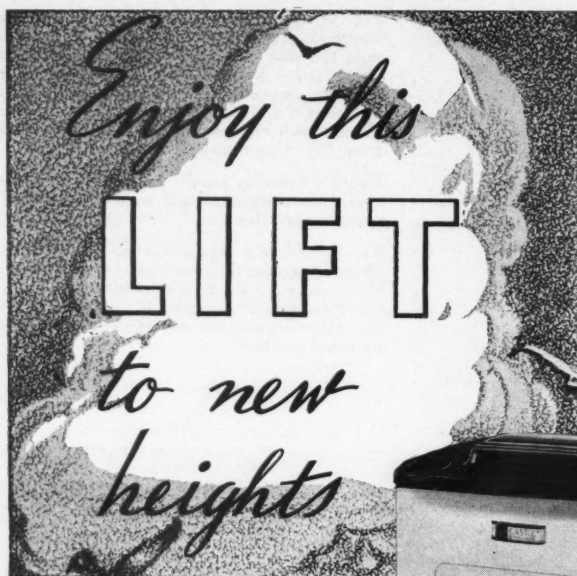


Fig. 6



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NOTES ON THE

Cuff

May 26: If you had a \$3500 mortgage payable over a period of seven years and were about to liquidate it in full in a period of six months, you would pat yourself on the back for excellent management. This was the accomplishment of a consumers' cooperative society, a meeting of which I attended on this date. The consumers' cooperative movement is spreading rapidly through the United States, following the pattern successfully established in the Scandinavian countries and in England. The idea of consumer cooperation is to protect the consumers by the grading and classification of articles. At this stage, consumer cooperation in the United States is concerned with the buying of foodstuffs, gasoline, dairy products, and such consumption goods. Consumers' cooperative societies are interested in buying medical care on a cooperative basis. We should watch this significant development in American life.

At this meeting, a discussion took place which showed once again that women are more practical than men. They talked about the freshness of beans; the storing of meats; the promptness of delivery. The men were autobiographical, oratorical, or pontifical in their remarks.

May 28: Von Oettingen, writing in *Medizinische Welt*, Berlin, describes the cause of some obscure pains in the throat. He describes two patients who complained of pain in the region of the palatine fossa, difficulty in swallowing, and a feeling of tension in the region of the ascending ramus. This newly recognized syndrome is produced by an abnormal prolongation of the styloid process. In examining roentgenograms of the upper molar area in those cases in which we find prolongation of the styloid process, it might be well to inquire of our patients regarding obscure pains in the area of the throat.

May 30: It is seldom that any public speaker has a good word for dentists. Today, a Memorial Day speaker, in
(Continued on page 311)

comparing the United States with other countries, declared that we lead the world in dentistry and engineering.

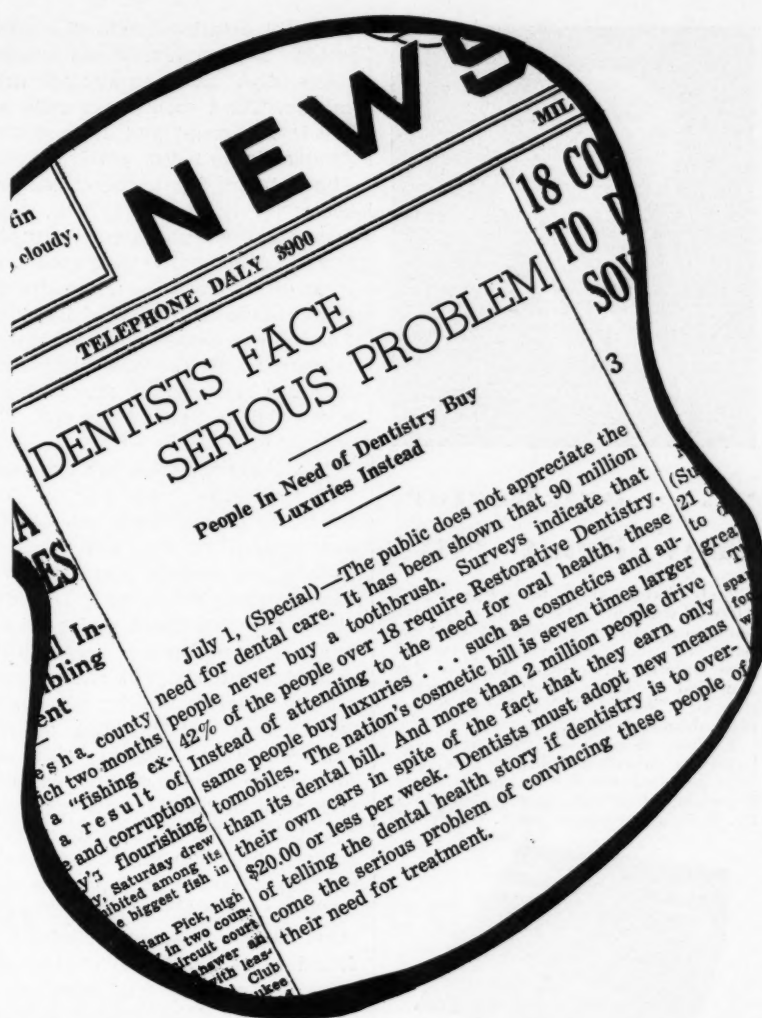
June 2: Our friends who "x-ray" only "suspicious" teeth, whatever that may mean, will be interested in seeing a roentgenogram of a lower molar area which clinically appeared "innocent." This area harbored an irregular-shaped radiopaque object. Clinical examination revealed no tenderness; the roentgenogram does not show bone destruction; apparently the contents of the mandibular canal were not invaded. The clinical impression was that this object represented an amalgam fragment which had dropped in a socket during tooth extraction and was imprisoned in the bone. The patient, a woman, aged 42, unaware of the presence of a foreign body before the roentgenogram was taken, complained of diffuse pains on the left side of the head radiating through the neck. The foreign body (a piece of amalgam) was removed, following the general surgical principle of removing easily accessible foreign bodies. The patient's painful condition of the face improved immediately.



What is the explanation of the relief of symptoms? (1) Was the area infected without roentgenographic evidence? (2) Was the foreign body causing pressure on nerve endings in the bone? (3) Was there some chemical irritation being produced on the nerve endings by the metallic foreign body?

June 6: In *The British Dental Journal* of May 2, R. S. Taylor, M.R.C.S., Eng., L.R.C.P. Lond., L.D.S. Eng., re-

(Continued on page 312)



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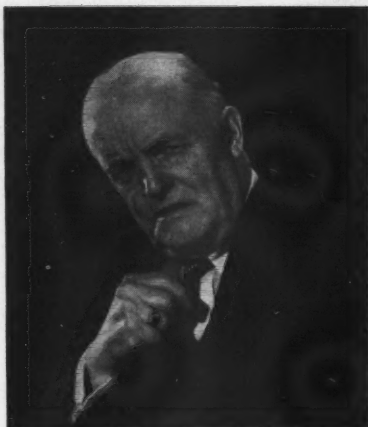
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ports the detailed results of a bacteriologic examination of one hundred consecutive and unselected third molars. Third molars normally are the last to erupt and often remain completely buried or partly erupted. These teeth, have, therefore, presented a controversial subject. It has been held that although an unerupted tooth does not cause local symptoms, it can give rise to general disturbances if the tooth is a focus of infection. The study reported was undertaken to investigate the possible relationship that has been said to exist between unerupted teeth and general disturbances.

The study included the examination and the recording of the condition of the pulp, microscopic examination of the direct smear, culture, and clinical observations of each patient. The investigation disclosed that the third molar in the adult (1) undergoes degenerative pulp changes (sixty-six showed pulp change macroscopically; (2) sixty-seven were not infected at all; nineteen were infected with *Str. longus haemolyticus*; (3) degenerative changes in the pulp (sixty-six out of the hundred, thirty-one of the sixty-six infected) precede and make possible bacterial invasion of the pulp while the tooth is in situ. (4) On the other hand, no constant relation was found to exist between clinical observations and bacterial infection of the pulp, even if the invading bacteria is generally regarded as pathogenic.

June 10: Today the papers lament that only 1450 newly-trained dentists are entering the ranks of dentistry. The implication is that with the decrease in dentists each year, there will not be enough to take the places of those who leave the profession by death and retirement. Among the 67,000 dentists in the United States there are a great many thousands who are not making an adequate living. They will not agree that there is a scarcity of dentists.

June 13: The call has gone out for the National Health Conference to be held in Washington, beginning on July 18. The object of the conference is to contribute through representative discussion “a better understanding of national needs in the field of health and medical care,” and “the formulation of policies which will enable the medical and other professions, private organizations, federal,

(Continued on page 314)



UNDERSTANDING and CONFIDENCE

The value of patient education cannot be discounted. Dentistry can be appreciated only by the patient who understands the beneficial results of adequate dental care. But understanding alone cannot control the average person's resistance to operative pain.

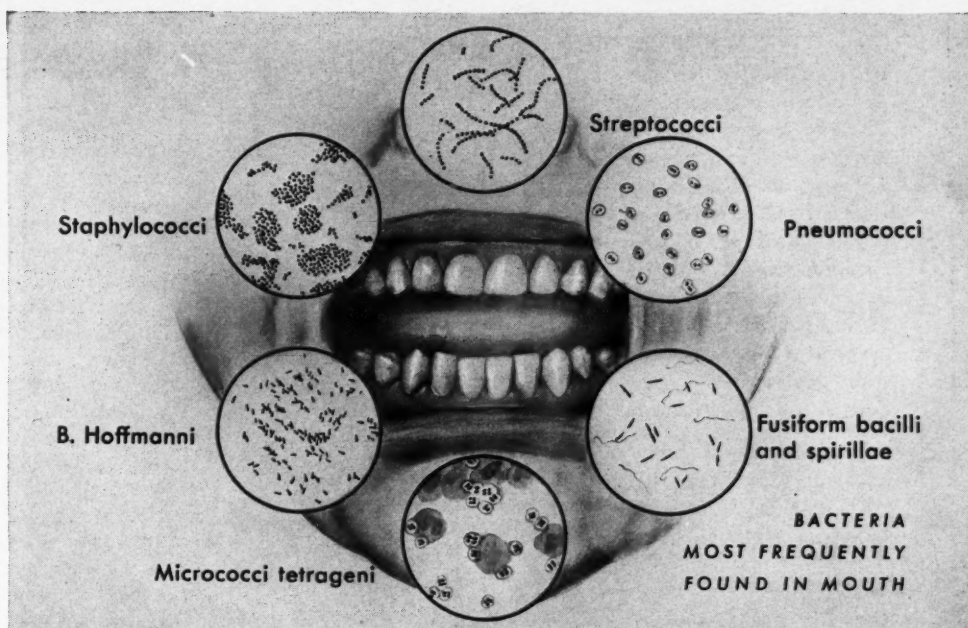
Unfortunately, patients remember their “dental chair” experiences long after the benefits are forgotten. That is why many enterprising dentists are combining patient educational activities with the use of McKesson analgesia. These dentists have experienced the beneficial results of combining patient understanding with patient confidence.

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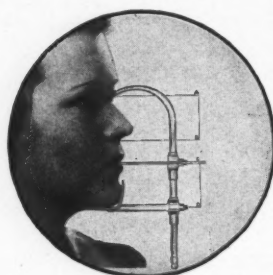
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state and local agencies, and individual citizens, to cooperate in efforts to meet these needs." This conference is being called through the suggestion of the President through his Interdepartmental Committee to Coordinate Health and Welfare Activities. Approximately one hundred participants have been invited not only from the medical and other professional groups but from social, labor, and agricultural groups. The proverbial handwriting is on the wall.

June 21: One might think that with the war in China, dentists of that country would not be thinking of cultural or scientific things. A correspondent from Chengtu, China, J. L. Wong, D.D.S., L.D.S., Dean of the College of Dentistry, National Central University of Chengtu, China, asks for information regarding the life and work of the famous American dentists of the eighteenth, nineteenth, and twentieth centuries. If any readers have biographical material, unpublished manuscripts, or historical data about significant dentists, Doctor Wong will be glad to receive the material.—E. J. R.

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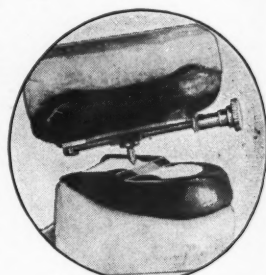
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DENTAL MEETING

Dates

American Dental Society of Europe, Stockholm, Sweden, August 1-3.

American Dental Association, annual meeting, St. Louis, Missouri, October 24-28.

American Society of Orthodontists, thirty-sixth annual meeting, Roosevelt Hotel, Los Angeles, California, July 11-14.

Federation Dentaire Internationale, Paris, France, July 21-26.

National Dental Association, twenty-fifth anniversary convention, De Sauble High School, Chicago, August 9-12.

ARPA Internationale, Prague, Czechoslovakia, August 26-28.

Southern California State Dental Society, regular meeting, Coronado Beach, September 12-14.

American Academy of Restorative Dentistry, St. Louis, Missouri, October 22-23.

Montreal Dental Club, fourteenth annual clinic, Mount Royal Hotel, Montreal, Canada, October 12-14.

American Society for the Promotion of Dentistry for Children, Jefferson Hotel, St. Louis, October 24.

American Dental Assistants Association, fourteenth annual meeting, DeSoto Hotel, St. Louis, Missouri, October 24-28.

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American Society for the Advancement of General Anesthesia in Dentistry, fourth Monday in March and October, New York City.

American Society of Oral Surgeons and Exodontists, St. Louis, Missouri, October 21-22.

American Association of Public Health Dentists, St. Louis, Missouri, October 23-24.

District of Columbia Dental Society, second and fourth Tuesdays in each month from October to June at the United States Public Health Service Auditorium, Washington, D. C.

Greater New York Dental Meeting, fourteenth annual meeting, Hotel Pennsylvania, New York City, December 5-9.

Great Lakes Association of Orthodontists, Cleveland, Ohio, November 7-8.

Florida State Dental Society, regular meeting, Jacksonville, November 10-12.

Polish Medical and Dental Association, national convention, Roosevelt Hotel, Pittsburgh, Pa., August 25-27.

American Academy of Periodontology, silver anniversary meeting, Coronado Hotel, St. Louis, Mo., October 20-22.

Association of American Women Dentists, seventeenth annual meeting, St. Louis, Mo., October 24-28.

The National Dental Association will hold its Twenty-Fifth Anniversary Convention in Chicago on August 9, 10, 11, and 12. Headquarters will be at the De Sauble High School on State and Fiftieth Streets. The Lincoln Dental Society of Chicago will be host to the visitors, mainly graduates of the Meharry Dental College and Howard University Dental School.

Pan American Odontological Association, second annual meeting, Adam Room, Hotel Stateler, St. Louis, Missouri, Monday, October 24. At this time there will be a luncheon at which Doctor Leroy M. S. Miner, Dean of the Harvard Dental School, will deliver an address on the subject: DENTISTRY AND THE GOOD NEIGHBOR POLICY to which all members of the profession are cordially invited. For information address Doctor Ralph Howard Brodsky, 205 West 57th Street, New York City.